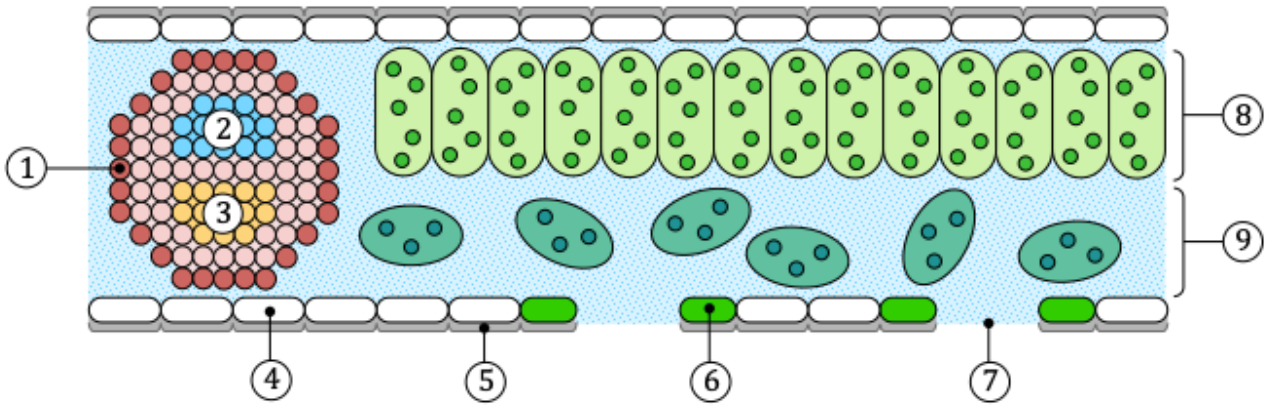


9.1 Transport in the Xylem of Plants

Plant Structure

Label the diagram of the leaf tissue of a plant



- | | | |
|---------|---------|---------|
| 1. | 4. | 7. |
| 2. | 5. | 8. |
| 3. | 6. | 9. |

Explain the location of the mesophyll (palisade and spongy) and vascular bundle within the leaf

Palisade Mesophyll:

.....

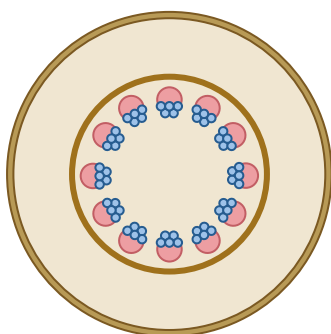
Spongy Mesophyll:

.....

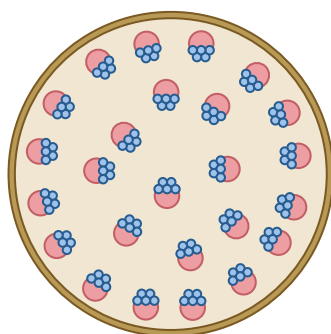
Vascular Bundle:

.....

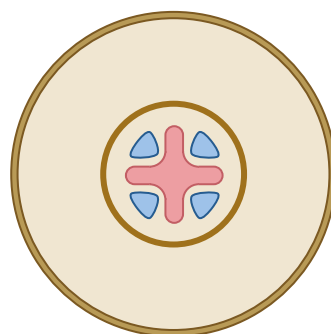
Identify the following plant tissues (monocot vs dicot ; root vs stem)



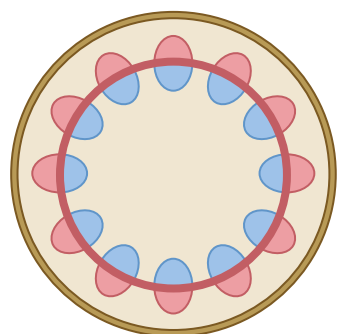
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Xylem Structure

Describe the structure of the xylem


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.....

.....

.....

Draw the structure of primary xylem vessels in stems

| MICROSCOPE | DRAWING |
|--|----------------|
| <p data-bbox="177 763 264 792">Xylem</p> <p data-bbox="435 763 539 792">Phloem</p>  <p data-bbox="185 1480 256 1509">Meta</p> <p data-bbox="360 1480 432 1509">Proto</p> | |

Transpiration

Define transpiration

.....

.....

Differentiate between fibrous and tap root systems

Fibrous:

Tap:

Explain how abiotic factors affect the rate of transpiration in a typical terrestrial plant

Light:

.....

Temperature:

.....

Wind:

.....

Humidity:

.....

Identify four adaptations in xerophytes and halophytes that help reduce or increase transpiration

| | Xerophyte | Halophyte |
|-------------|--|--|
| Conditions | | |
| Issue | | |
| Adaptations | 1. 2. 3. 4. | 1. 2. 3. 4. |

List three ways water transport can be modelled in xylem

1.

2.

3.

Describe how potometers can be used to measure transpiration rates

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